

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (withdrawn) A system for providing voice communications over a packet-switched network, comprising:
 - a gateway server that handles calls received from a public switched telephone network and a packet-switched network;
 - a routing server; and
 - a database server, wherein messages can be sent between each of the gateway server, routing server, and database server over the packet-switched network.
2. (withdrawn) The system of claim 1, further comprising:
 - a provisioning system coupled to said database server.
3. (withdrawn) The system of claim 1, further comprising:
 - a management system; wherein messages can be sent between each of the gateway server, routing server, database server, and management system over the packet-switched network.
4. (withdrawn) The system of claim 3, further comprising:
 - a network manager that automatically queries a client database to determine an update, and sends a message representative of the update to at least one of the gateway server, routing server, database server, and management system over the packet-switched network.
5. (withdrawn) The system of claim 1, further comprising:
 - a licensing server.

6. (currently amended) A system for providing gateway services in a voice communication system over a packet-switched network, comprising:
 - an application layer that includes application services; and
 - a platform for sessions and modules, wherein said application layer includes a gateway server and a common service[[]]; and
 - a routing manager that manages usage on the gateway server, wherein the routing manager comprises:
 - maintaining means for maintaining a list of routes;
 - managing means for managing connections to the routing servers on the network;
 - exporting means for exporting local routes to routing servers;
 - importing means for importing disseminated routes from routing servers;
 - receiving means for receiving a request for a route;
 - obtaining means for obtaining static global and dynamic routes from routing servers;
 - caching means for caching said static global and said dynamic routes for future use;
 - finding means for finding matching routes for a specific telephone number; and
 - prioritizing means for prioritizing matching routes.
7. (original) A system of claim 6, wherein said application layer also includes an autoforward service.
8. (original) A system of claim 7, wherein said platform includes a session manager that creates and manages sessions.
9. (original) A system of claim 8, wherein said session manager includes a rule engine.

10. (original) A system of claim 8, wherein said session corresponds to a voice call.
11. (currently amended) A system of claim 8, further comprising:
 - a line group manager that coordinates communication between a telephone line side and a packet-switched network side of the gateway server;
 - ~~a routing manager that manages route usage on the gateway server;~~
 - a database access manager that monitors access to the database server;
 - a media manager that manages voice prompt usage; and
 - a call rating manager that determines the costs to apply to each call.
12. (currently amended) A system of claim [[11]] 8, further comprising:
 - a parsing subsystem coupled to said routing manager.
13. (original) A system of claim 12, wherein said parsing subsystem comprises:
 - maintaining means for maintaining a parsing table;
 - receiving means for receiving call information;
 - determining means for determining a country code;
 - retrieving means for retrieving pattern data from said parsing table;
 - determining means for determining an area code;
 - determining means for determining a local number;
 - determining means for determining an extension; and
 - outputting means for outputting a call address.
14. (currently amended) A system of claim [[11]] 8, further comprising:
 - a dynamic cache subsystem coupled to said routing manager.
15. (original) A system of claim 12, wherein said parsing subsystem matches routes by wildcarding.
16. (original) A system of claim 11, further comprising:
 - a conversion module.

17. (original) A system of claim 11, further comprising:
a hardware device manager module that coordinates telephony and network components.
18. (cancelled)
19. (currently amended) A system of claim [[18]] 8, further comprising:
connecting means for connecting to routing servers; and
managing means for managing connections to routing servers.
20. (withdrawn) A system for a gateway server, comprising:
first handling means for handling calls on a packet-switched network;
second handling means for handling calls on a telephony network;
bridging means for bridging said calls with routes between both a packet-switched network and a telephony network;
first interacting means for interacting with calls to collect user information;
first interfacing means for interfacing with routing system;
second interfacing means for interfacing with database system; and
second interacting means for interacting with other gateway servers.
21. (withdrawn) A system of claim 20, wherein said routes comprise:
querying means for querying for a route; and
providing means for providing said route, wherein said route is stored locally on the gateway server.
22. (cancelled)
23. (cancelled)
24. (cancelled)

25. (currently amended) A system for routing server, comprising:
- first receiving means for receiving exported local routes from gateway servers[[]], wherein said first receiving means for receiving exported local routes includes:
 - requesting means for requesting exportable local routes from gateway servers;
 - receiving means for receiving said exportable local routes from gateway servers;
 - transforming means for transforming said exportable local routed into dynamic routes on the routing server;
 - storing means for storing said dynamic routes; and
 - updating means for updating said dynamic routes.;
 - transforming means for transforming exported local routes into dynamic routes;
 - first storing means for storing said dynamic routes;
 - second storing means for storing static global and disseminated routes;
 - first providing means for providing said disseminated routes to gateway servers;
 - second receiving means for receiving requests for matching routes from gateway servers;
 - determining means for determining a matching route; and
 - second providing means for providing said matching route.
26. (cancelled)
27. (original) A system of claim 25, wherein said means for transforming an exported local route comprises:
- receiving means for receiving exported local routes;
 - first checking means for checking a route address entry;
 - second checking means for checking route timing information;

third checking means for checking a route access entry;
fourth checking means for checking route ordering information;
first adding means for adding a route identity;
second adding means for adding of exporting gateway server; and
third adding means for adding a temporal stamp to said exported local
route.

28. (original) A system of claim 25, wherein said means for disseminated routing
comprise:

first providing means for providing routes to a routing server;
querying means for querying the routing server for said routes
configured for dissemination; and
second providing means for providing matching routes to a gateway
server.

29. (original) A system of claim 25, wherein said means for dynamic routing,
comprise:

connecting means for connecting to a routing server;
querying means for querying a routing server;
providing means for providing matching routes to a gateway server;
and
matching means for storing said matching routes on a gateway server.

30. (original) A system of claim 25, wherein said means for static global routing,
comprise:

connecting means for connecting to a routing server;
querying means for querying a routing server; and
providing means for providing matching routes to a gateway server.

31. (cancelled)

32. (cancelled)
33. (cancelled)
34. (cancelled)
35. (withdrawn) A method of providing voice communications over a packet-switched network, comprising the steps of:
 - handling calls received from a public switched telephone network and a packet-switched network with a gateway server that;
 - distributing call routing information with a routing server; and
 - managing user and call information with a database server, wherein messages can be sent between each of the gateway server, routing server, and database server over the packet-switched network.
36. (withdrawn) The system of claim 35, further comprising the steps of:
 - accessing database records with a provisioning system coupled to said database server.
37. (withdrawn) The system of claim 35, further comprising the steps of:
 - configuring system properties with a management system, wherein messages can be sent between each of the gateway server, routing server, database server, and management system over the packet-switched network.
38. (withdrawn) The system of claim 37, further comprising the steps of:
 - updating system components with a network manager that automatically queries a client database to determine an update, and sends a message representative of the update to at least one of the gateway server, routing server, database server, and management system over the packet-switched network.
39. (withdrawn) The system of claim 35, further comprising the steps of:

registering system components with a licensing server.

40. (currently amended) A method of providing gateway services in a voice communication system over a packet-switched network, comprising the steps of:

instantiating application services within an application layer; ~~and~~
providing a software object platform for sessions and modules,
wherein said application layer includes a gateway service and a common
service[[]]; and

managing route usage on the gateway server with a routing manager,
wherein managing route usage includes:

maintaining means for maintaining a list of routes;

managing connections to the routing servers on the network;

exporting local routes to routing servers;

importing disseminated routes from routing servers;

receiving a request for a route;

obtaining static global and dynamic routes from routing servers;

caching said static global and said dynamic routes for future use;

finding matching routes for a specific telephone number; and

prioritizing matching routes.

41. (original) A method of claim 40, wherein said application layer also includes an autoforward service.
42. (original) A method of claim 41, wherein said platform includes a session manager that creates and manages sessions.
43. (original) A method of claim 42, wherein said session manager includes a rule engine.
44. (original) A method of claim 42, wherein said session corresponds to a voice call.

45. (cancelled)
46. (currently amended) A method of claim 4[[5]]0, further comprising the steps of:
maintaining a parsing subsystem coupled to said routing manager.
47. (original) A method of claim 46, wherein said parsing subsystem comprises the steps of:
maintaining a parsing table;
receiving call information;
determining a country code;
retrieving pattern data from said parsing table;
determining an area code;
determining a local number;
determining an extension; and
outputting a call address.
48. (currently amended) A method of claim 4[[5]]0, further comprising the steps of:
maintaining a dynamic cache subsystem coupled to said routing manager.
49. (original) A method of claim 46, wherein said parsing subsystem matches routes by wildcarding.
50. (currently amended) A method of claim 4[[5]]0, further comprising the steps of:
connecting a conversion module.
51. (currently amended) A method of claim 4[[5]]0, further comprising the steps of:

coordinating telephony and network components with a hardware device manager module.

- 52. (cancelled)
- 53. (currently amended) A method of claim [[52]] 40, further comprising the steps of:
 - connecting to routing servers; and
 - managing connections to routing servers.
- 54. (withdrawn) A method of a gateway server, comprising the steps of:
 - handling calls on a packet-switched network;
 - handling calls on a telephony network;
 - bridging said calls with routes between both a packet-switched network and a telephony network;
 - interacting with calls to collect user information;
 - interfacing with routing system;
 - for interfacing with database system; and
 - for interacting with other gateway servers.
- 55. (withdrawn) A method of claim 54, wherein said routes comprise:
 - querying for a route; and
 - providing said route, wherein said route is stored locally on the gateway server.
- 56. (cancelled)
- 57. (cancelled)
- 58. (cancelled)
- 59. (cancelled)

- 60. (cancelled)
- 61. (cancelled)
- 62. (cancelled)
- 63. (cancelled)
- 64. (cancelled)
- 65. (withdrawn) A method of ordering routes, comprising the steps of:
 - checking the address of a route;
 - checking the preference of a route;
 - checking the cost estimate of a route;
 - checking the quality of service of a route; and
 - checking the type of route.
- 66. (withdrawn) A method of prioritizing routes, comprising the steps of:
 - checking a route address entry;
 - checking route timing information;
 - checking a route access entry;
 - checking route ordering information;
 - determining a reduced route;
 - comparing a requested route with said reduced route; and
 - providing a list of routes.
- 67. (cancelled)
- 68. (cancelled)
- 69. (withdrawn) A computer program product comprising a computer useable medium having computer program logic stored therein, said computer program logic comprising:

means for enabling a computer to handle calls received from a public switched telephone network and a packet-switched network with a gateway server;

means for enabling a computer to distribute call routing information with a routing server; and

means for enabling a computer to manage user and call information with a database server, wherein messages can be sent between each of the gateway server, and database server over the packet-switched network.

70. (withdrawn) The computer program product of claim 69, further comprising:

means for enabling a computer to access database records with a provisioning system coupled to said database server.

71. (withdrawn) The computer program product of claim 69, further comprising:

means for enabling a computer to configure system properties with a management system; wherein messages can be sent between each of the gateway server, routing server, database server, and management system over the packet-switched network.

72. (withdrawn) The computer program product of claim 71, further comprising:

means for enabling a computer to update system components with a network manager that automatically queries a client database to determine an update, and sends a message representative of the update to at least one of the gateway server, routing server, database server, and management system over the packet-switched network.

73. (withdrawn) The computer program product of claim 72, further comprising:

means for enabling a computer to register system components with a licensing server.

74. (currently amended) A computer program product of providing gateway services in a voice communication system over a packet-switched network, comprising:

means for enabling a computer to instantiate application services within an application layer; ~~and~~

means for enabling a computer to provide a software object platform for sessions and modules, wherein said application layer includes a gateway service and a common service[[]]; and

means for enabling a computer to manage route usage on the gateway server with a routing manager, wherein the routing manager includes;

means for enabling a computer to maintain means for maintaining a list of routes;

means for enabling a computer to manage means for managing connections to the routing servers on the network;

means for enabling a computer to export means for exporting local routes to routing servers;

means for enabling a computer to import means for importing disseminated routes from routing servers;

means for enabling a computer to receive means for receiving a request for a route;

means for enabling a computer to obtain means for obtaining static global and dynamic routes from routing servers;

means for enabling a computer to cache means for caching said static global and said dynamic routes for future use;

means for enabling a computer to find means for finding matching routes for a specific telephone number; and

means for enabling a computer to prioritize means for prioritizing matching routes.

75. (original) A computer program product of claim 74, wherein said application layer also includes an autoforward service.

76. (original) A computer program product of claim 75, wherein said platform includes a session manager that creates and manages sessions.
77. (original) A computer program product of claim 76, wherein said session manager includes a rule engine.
78. (original) A computer program product of claim 76, wherein said session corresponds to a voice call.
79. (currently amended) A computer program product of claim 76, further comprising:
means for enabling a computer to coordinate communication between a telephone line side and a packet-switched network side of the gateway server with a line group manager;
~~means for enabling a computer to manage route usage on the gateway server with a routing manager;~~
means for enabling a computer to monitor access to the database server with a database access manager;
means for enabling a computer to manage voice prompt usage with a media manager; and
means for enabling a computer to determine the costs to apply to each call with a call rating manager.
80. (original) A computer program product of claim 79, further comprising:
means for enabling a computer to maintain a parsing subsystem coupled to said routing manager.
81. (original) A computer program product of claim 80, wherein said parsing subsystem comprises:
means for enabling a computer to maintain means for maintaining a parsing table;

means for enabling a computer to receive means for receiving call information;

means for enabling a computer to determine means for determining a country code;

means for enabling a computer to retrieve means for retrieving pattern data from said parsing table;

means for enabling a computer to determine means for determining an area code;

means for enabling a computer to determine means for determining a local number;

means for enabling a computer to determine means for determining an extension; and

means for enabling a computer to output means for outputting a call address.

82. (original) A computer program product of claim 79, further comprising:
means for enabling a computer to maintain a dynamic cache subsystem coupled to said routing manager.
83. (original) A computer program product of claim 80, wherein said parsing subsystem matches routes by wildcarding.
84. (original) A computer program product of claim 79, further comprising:
means for enabling a computer to connect a conversion module.
85. (original) A computer program product of claim 79, further comprising:
means for enabling a computer to coordinate telephony and network components with a hardware device manager module.
86. (cancelled)

87. (currently amended) A computer program product of claim [[86]] 74, further comprising:
- means for enabling a computer to connect means for connecting to routing servers; and
 - means for enabling a computer to manage means for managing connections to routing servers.
88. (withdrawn) A computer program product of a gateway server, comprising:
- means for enabling a computer to handle calls on a packet-switched network;
 - means for enabling a computer to handle calls on a telephony network;
 - means for enabling a computer to bridge said calls with routes between both a packet-switched network and a telephony network;
 - means for enabling a computer to interact with calls to collect user information;
 - means for enabling a computer to interface with routing system;
 - means for enabling a computer to interface with database system; and
 - means for enabling a computer to interact with other gateway servers.
89. (withdrawn) A computer program product of claim 88, wherein said routes comprise:
- means for enabling a computer to query for a route; and
 - means for enabling a computer to provide means for providing said route, wherein said route is stored locally on the gateway server.
90. (currently amended) A computer program product of a routing server system comprising:

means for enabling a computer to serve routes with a routing application layer; ~~and~~

means for enabling a computer to provide a common object platform for memory and modules, wherein said routing application layer includes a route translation service[[]];

means for enabling a computer to request exportable local routes from gateway servers;

means for enabling a computer to receive said exportable local routes from gateway servers;

means for enabling a computer to transform said exportable local routed into dynamic routes on the routing server;

means for enabling a computer to store said dynamic routes; and

means for enabling a computer to update said dynamic routes.

91. (original) A computer program product of claim 90, further comprising:

means for enabling a computer to maintain a parsing subsystem coupled to the routing server.

92. (original) A computer program product of claim 91, wherein said parsing subsystem comprises:

means for enabling a computer to maintain a parsing table;

means for enabling a computer to receive call information;

means for enabling a computer to determine a country code;

means for enabling a computer to retrieve pattern data from said parsing table;

means for enabling a computer to determine an area code;

means for enabling a computer to determine a local number;

means for enabling a computer to determine an extension; and

means for enabling a computer to output a call address.

93. (currently amended) A computer program product of routing server of claim 90, comprising:
- means for enabling a computer to receive exported local routes from gateway servers;
 - means for enabling a computer to transform exported local routes into dynamic routes;
 - means for enabling a computer to store said dynamic routes;
 - means for enabling a computer to store static global and disseminated routes;
 - means for enabling a computer to provide said disseminated routes to gateway servers;
 - means for enabling a computer to receive requests for matching routes from gateway servers;
 - means for enabling a computer to determine a matching route; and
 - second providing means for provide said matching route.
94. (cancelled)
95. (original) A computer program product of claim 93, wherein said means for transforming an exported local route comprises:
- means for enabling a computer to receive exported local routes;
 - means for enabling a computer to check a route address entry;
 - means for enabling a computer to check route timing information;
 - means for enabling a computer to check a route access entry;
 - means for enabling a computer to check route ordering information;
 - means for enabling a computer to add a route identity;
 - means for enabling a computer to add of exporting gateway server; and
 - means for enabling a computer to add a temporal stamp to said exported local route.

96. (original) A computer program product of claim 93, wherein said means for disseminated routing comprise:
- means for enabling a computer to provide routes to a routing server;
 - means for enabling a computer to query the routing server for said routes configured for dissemination; and
 - means for enabling a computer to provide matching routes to a gateway server.
97. (original) A computer program product of claim 93, wherein said means for dynamic routing, comprise:
- means for enabling a computer to connect to a routing server;
 - means for enabling a computer to query a routing server;
 - means for enabling a computer to provide matching routes to a gateway server; and
 - means for enabling a computer to store said matching routes on a gateway server.
98. (original) A computer program product of claim 93, wherein said means for static global routing, comprise:
- means for enabling a computer to connect to a routing server;
 - means for enabling a computer to query a routing server; and
 - means for enabling a computer to provide matching routes to a gateway server.
99. (withdrawn) A computer program product of ordering routes, comprising:
- means for enabling a computer to check the address of a route;
 - means for enabling a computer to check the preference of a route;
 - means for enabling a computer to check the cost estimate of a route;
 - means for enabling a computer to check the quality of service of a route; and
 - means for enabling a computer to check the type of route.

100. (withdrawn) A computer program product of prioritizing routes, comprising:
means for enabling a computer to check a route address entry;
means for enabling a computer to check route timing information;
means for enabling a computer to check route access entry;
means for enabling a computer to check route ordering information;
means for enabling a computer to determine a reduced route;
means for enabling a computer to compare a requested route with said
reduced route; and
means for enabling a computer to provide a list of routes.
101. (cancelled)
102. (cancelled)
103. (cancelled)
104. (cancelled)
105. (cancelled)